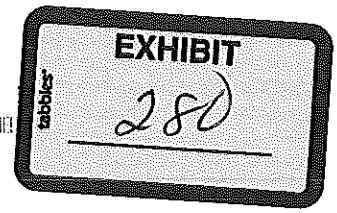
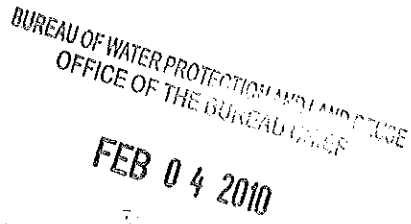


SUSAN K. SUTHERLAND
NEPTUNE DRIVE, GROTON CT 06340
(860) 345-0568

FROM



February 4, 2010

Paul E Stacey
Planning and Standards Division
CTDEP
(Sent by fax to (860)-424-4077

Dear Mr Stacey:

I have attached a letter signed by me and Mr Whitney Adams with regard to the proposals for Stream Flow Standards and Regulations.

If you have any questions, I can also be contacted by e-mail at susansutherland@snet.net

Sincerely

Sue Sutherland

Groton Open Space Association, Inc.
P.O. Box 9187, Groton, CT 06340-9187
www.GOSAonline.org

GOSA

Paul E Stacey, CTDFEP
Planning & Standards Division
79 Elm St.
Hartford, CT 06040

February 3, 2010

Dear Mr. Stacey:

The Groton Open Space Association, Inc. has been engaged in studying Fort Hill Brook in Groton for over a year as part of an effort to save a 65 acre parcel of open space through which this brook runs. The headwaters of Fort Hill Brook are in Groton. This perennial stream runs primarily southerly for about four miles ending in Mumford Cove. As you probably know, Mumford Cove is a pristine saltwater estuary with a large, healthy Eel Grass community.

In the potential open space section of Fort Hill Brook which we studied, the brook flows through two waterfalls; a smaller upstream waterfall and a larger downstream 10 foot high waterfall. Both waterfalls with their associated rapids result in high oxygen levels in the water. Within the potential open space portion of the brook, we were pleasantly surprised to discover four vernal pools totally dependent on adequate water flow through this potential open space section of the brook. Each of the four vernal pools is dependent on water seasonally overflowing the brook. The first vernal pool consists of a catchment basin adjacent to the upstream falls. A second vernal pool, a ~50 ft long lagoon, is also located just below the upper waterfall and qualifies as a Tier 1 vernal pool. The third vernal pool, located further downstream, is a Red Maple swamp-associated Tier 1 vernal pool (**another Tier 1 vernal pool is located adjacent to it on a neighboring property**). The fourth vernal pool consists of a large rock basin, or catchment, adjacent to the 10 ft. high downstream waterfall. This rock basin, approximately one-third down the face of the waterfall, is another Tier 1 vernal pool, containing salamander and wood frog egg masses, plus spire snails and four toed salamanders.

If the brook's flow were to be altered it would have a dramatic impact on many amphibian colonies. There is great interconnectedness amongst the vernal pools in this area – the four found thus far in Fort Hill Brook and the more traditional vernal pools in the area formed from seeps and water runoff.

Unless careful study is undertaken, the amphibian population and habitats can be greatly underestimated. Under the proposed DEP Streamflow Standards and Regulations, the greater the existing flow impairment, the more withdrawal would be allowed. Before such drawdown is allowed on any given stream, a through biological analysis should be required in the spring when there is amphibian activity. This must be part of the regulations if amphibian populations are to be protected. Currently there is no provision to make sure streamside vernal pools or sloughs are still flooded, and that groundwater-fed wetlands are not dewatered by diversion wells.

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Field verification is needed for each stream reach, to make sure permitted blanket withdrawal leaves enough water for pollutant/nutrient dilution or to maintain n vertebrate/ amphibian community diversity. Hydrologically impaired streams, assigned to Class 3 or 4, may have surprisingly high diversity - though maybe not fish- such that they should **not** be written off, with automatic substantial diversions allowed. Impaired streams can also recover remarkably over a surprisingly short distance, e.g. Fort Hill Brook.

We welcome you or someone from your team to visit this interesting site. Whitney would be happy to guide your people to the sites and to detail the scientific discoveries made thus far.

Best regards,

Whitney R Adams, Jr., Monsanto Scientist (Retired) wradamjr@gmail.com
Sue Sutherland, Wetlands Survey Assistant, suesutherland@snet.net
Board of Director Members, Groton Open Space, Groton, Connecticut

cc: Sigrun N. Gadwa, MS, PWS, Ecologist, Registered Soil Scientist